

Legend Homes DARES YOU TO COMPARE

Quality Comparison: Features Definitions

LONGEVITY OF STRUCTURE

1. **Seismic Design:** Each home is individually engineered to withstand the forces of earthquakes and high winds. Basic Code allows for prescriptive guidelines to be applied in a rule of thumb format, regardless of the cumulative effect of varying elements of the entire structure.
2. **1st Floor Assembly:** Legend employs beams at 32 inches on center with 1 1/8" thick T&G plywood. This provides strength while allowing the tightest possible seal against air being drawn in from the crawl space or the exterior at the top of the foundation. Old style 2'x6' decking leaks significantly, with gaps between boards every five inches across the entire home, and must span 48 inches. Legend's floors have an additional beam support for every eight feet across the home.
3. **2nd Floor Assembly:** We use either manufactured joist systems, or webbed floor trusses. Both are engineered for the particular structure, stay straight as the structure cures, and hold fasteners and adhesives better, preventing floor squeaks and noises over time. Many builders use 2'x10' sawn wood, increasing the number of trees it takes to build the home.
4. **House Tightening & Air Sealing:** Great care is taken during assembly of the floors, walls, and ceilings to ensure proper seals are in place. This practice prevents air leakage into the home as well as inside air from escaping, protecting indoor air quality while reducing energy bills. We follow the Energy Trust Thermal Bypass checklist system, as well as our own checklists, at every stage of every home. These are also certified by Energy Trust's certifier partner, Earth Advantage®. At the end of construction, the entire home is tested using a Blower Door system to measure its success. See ENERGY section for details.
5. **Professionally Installed Windows:** In cooperation with the manufacturers of our windows and exterior waterproofing materials, we developed an ironclad assembly method to eliminate water and air infiltration around windows. The installation is performed by a company that specializes in doing so, and provides the delivery of the windows at the same time. This has significantly reduced the possibility of damage from transit and storage on site.
6. **Exterior Door Pan Flashing:** The same professionals installing the windows also set the exterior doors. A hard, durable pan is used to protect the structure, protecting from moisture leaks and limiting water damage to doors and floors.



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LONGEVITY OF STRUCTURE (CONT.)

7. **Fiber Cement Siding & Trim:** This cementous material has far superior weather resistance qualities than wood. The big advantage, however, is that it is more dimensionally stable. Wood expands and contracts to such a degree that caulking used to seal around windows and other trim fatigues and fails much quicker, requiring more maintenance of the home's exterior. It also carries the same 50-year warranty.
8. **Stainless Steel Nails to Secure Siding:** The Hardie® brand siding used on our homes has a 50-year warranty. We believe using nails that can withstand contact with cementous materials for that long only makes sense.
9. **Zonal Pressure Relief:** Each habitable room has either a return air duct or balance duct that allows the room to discharge air even when the door is closed. This allows the heating and cooling systems to balance pressure and therefore temperature. In a typical home, as the furnace pushes air into the room, it must force its way under a closed door to get back to the furnace return, greatly reducing the flow of air through the system and increasing leakage to the exterior or attic.
10. **Behind-the-Siding Photo Documentation:** Think of this as seeing your home in its underwear. After the Tyvek house-wrap is fully installed, windows woven in, flashings properly set, dammed, and lapped, pipe and wire gaskets woven in, and kick-out flashings in place, we take photos of the entire exterior envelope prior to siding installation. These are placed on a jump-drive, along with photos of the interior of the home, the certifications issued to that specific address, and all your selections and purchase documents. You receive this package at the end of construction, so you can provide it to your home inspector if you wish. Rest assured that everything has been installed properly and nothing is hidden.
11. **3rd Party Certifications:** We hire independent firms for calculating, inspecting, and certifying key elements of the construction process, to prove our claims to you. Earth Advantage®, an Oregon non-profit company recognized as the leader in sustainable building practices consulting, analysis, inspection, testing, and certifications, has been helping us improve the energy efficiency and environmental responsibility of our homes for over seven years. Home Certified™ measures moisture content in wood framing prior to drywall, provides dry-out services as needed, checks sub-floors prior to hardwood floor installations, and final levels throughout the home after construction is completed. In addition, you are provided with copies of these certifications prior to closing.



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ENERGY EFFICIENCY

12. **Certified at Least 15% Above Code:** Earth Advantage® analyzes the house plans, specifications, materials, and construction details on a point system. They apply software from the Energy Trust of Oregon to calculate the anticipated cost of energy needed for a typical family to live in each home, and the carbon footprint left by it. This creates the Energy Performance Score (EPS) assigned to each home, similar to a Miles Per Gallon score for a new car. Some day an EPS score may be required to sell any home, but for now this is a volunteer program, and requires several elements of the construction exceed Building Code requirements that create performance at least 15% better than a new home built to code. If you are shopping for a new home, be sure to ask what the EPS score is for the home you are looking at. If it doesn't have one, it will cost you more for utilities, and may not be as comfortable to live in.
13. **Energy Trust Thermal Bypass Checklist:** Energy Trust is a State of Oregon agency charged with promoting energy programs state wide. They developed a detailed, technical set of checklists to be used by builders and inspected by designated Certifiers (Earth Advantage®) to ensure a high level of performance from the exterior shell assembly of homes and buildings. These checklists, as well as our own internal ones, are used on every home we build. This process ensures a better-built home than any home built without it.
14. **R-23 Polar Blanket Wall Insulation:** Once the entire structure has been inspected by the city for Code compliance, Earth Advantage® for the Thermal Bypass Checklist, and our own internal inspection checklists, the home is insulated. We have replaced the old, poorly-fitting, R-21 rolled bat insulation with a Polar Blanket system. A strong, translucent membrane is stretched tight and continuous over all the exterior wall surfaces, secured with staples every inch at studs and corners. Fiberglass fibers are then blown into the cavity created with the exterior wall sheathing, to completely fill every nook and cranny of each space. A very small amount of water-based adhesive is present in the fibers, causing them to remain in their original position and not settle over time. The result is not only highly effective at conserving energy, but this will be the quietest home you have ever lived in.
15. **R-38 Floor Insulation:** Code requires only R-30, and doesn't require sealing of pipe penetrations through the floor, allowing crawlspace air to be drawn into the living space above. We seal all penetrations: Up, down, or sideways, wherever there is insulation.



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ENERGY EFFICIENCY (CONT.)

16. **R-49 Attic Insulation:** Code requires only R-38, and doesn't require sealing of pipe and wire penetrations from the walls into the attic, or at light fixtures in the ceiling.
17. **0.32 U Factor Window Performance Rating:** The lower the rating, the better the window. Code allows for 0.35 U Factor. Our windows achieve the lower rating by the use of Argon gas and Low-Emissive coating, providing protection from ultraviolet light as well as energy loss through the glass assembly.
18. **95% Efficient Furnace:** High-Efficiency furnaces, reducing energy and natural gas usage. Code allows 91%. (Corvallis features 92%+)
19. **Blower Door Test:** Measures air loss throughout the home to identify areas needing better sealing. Once construction is completed, a large blower is fitted to the entry door and sealed. As air is drawn out of the house by the blower, sensitive measuring devices calculate the amount of air that can be sucked into the home through anywhere it can. There is no way to cheat this test, either the home leaks or it doesn't. Failure to pass means no certification can be issued, and the source of the leak has to be corrected and re-tested. If you are shopping for a home, and there is no Earth Advantage® Certification, there has not been a blower door test and you can safely assume that house leaks air.
20. **Compact Fluorescent Light Fixtures:** Lighting which consumes a fraction of the energy and lasts longer than regular incandescent bulbs. At least 75% of the lighting in a Legend Home is CFL.
21. **Raised Heel Roof Trusses:** Allow for full depth of ceiling insulation to extend to the outside edge of exterior walls (sheathing to sheathing) for optimal coverage.
22. **High-Efficient Gas Furnace & Duct System in Conditioned Air Space:** Located within the living space of the home, this high-efficient furnace reduces energy and natural gas usage by avoiding heating the non-conditioned air space in the garage or attic. Sealed heat ducts are located within a specialized floor system in the home to reduce heating costs.
23. **Photovoltaic System (Solar Panels):** Legend creates a better home investment for buyers with a solar panel system designed to supplement the electricity of the home as well as reduce energy use and overall cost.



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INNOVATIVE SUSTAINABILITY

24. **Cast Iron "Drops":** The drain pipes in the walls of the first floor change from ABS plastic to cast iron. This greatly reduces sound at the first floor rooms when a toilet is flushed upstairs or when someone is taking a shower.
25. **Lead Plumbing Jacks:** The drains in every home must have vent pipes that penetrate the roof. Any penetration of the roof is a serious matter and should be implemented to last at least 30 years. A typical rubber gasket won't last anywhere near that long.
26. **Treated, Primed, Finger-joint Barges at the Roof:** This the most difficult place to paint on any home and is the first to show its age. The long, wide boards forming the angled edge of the roof need to be strong, but not too heavy and stand up to the elements. We have selected a product from Australia/New Zealand that is dry, finger-jointed for strength and straightness, treated to prevent rot and textured and primed to hold paint. It will still be the first thing on your home to require paint, but will look great far longer than most other materials available.
27. **Final Stair Treads & Risers:** During the early stages of construction, the framing carpenters build the stairs to the second floor. At that time, it is usually before the roof is on, so everything is exposed to the weather. Many builders use those original treads and risers as the final ones, ignoring the weathering and the wear of the rest of the construction process, and just lay carpeting over them in that condition. At Legend, we install temporary treads and risers at framing, and have the finish carpenter install fresh, clean ones after the sheetrock is done and the walls painted. They fit better and are not likely to develop squeaks over time.
28. **Flexible Adhesive at Floors & Stairs:** Most readily available construction adhesives are not made for wet-weather application, and get brittle with age. If floor sheathing, joists and stair treads only depend on fasteners to keep them from movement, squeaks result and get worse over time. We use RainBuster™, recognizable by the bright white color, which adheres in any weather and stays flexible enough to avoid fracturing over time.
29. **Composite Engineered Wood Materials:** Wood materials (wood trim, framing materials, etc.) made from recycled wood, short-growth forests and off-cuts from the milling processes, reduces the demand on forests.
30. **Recycled Construction Materials:** Construction debris, such as cardboard packaging, wood, metal and drywall scraps are sorted and delivered to recycling centers.



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INNOVATIVE SUSTAINABILITY (CONT.)

31. **Local Vendors & Suppliers:** Local labor and material use contributes directly to our local economy and resource efficiency. Many vendors and suppliers implement Earth-friendly environmental practices.
32. **Ceiling Heights:** Most new homes are built with nine foot ceilings on the first floor, but only eight foot ceilings upstairs. Our added height makes the rooms feel larger and more open, increases the size of windows, and provides more storage space in closets.
33. **Low Voltage Hub:** The services for phone, cable, and Internet are provided to the home by low voltage. We provide a central panel (usually in the Master Bedroom closet) where the service wires are installed, and the wires to the various locations in the home originate. This allows more flexibility for you in voice/data distribution, and a far superior signal quality to each location than the old "Daisy Chain" method. It also provides for upgrades such as security systems and whole-home sound if designated early in construction. See our Design Center for details.
34. **Smurf Tube at the Fireplace:** A hidden tube within the wall which provides a flexible chase-way to connect your high-definition television over the fireplace with your sound equipment next to the fireplace, behind the sheetrock surface.
35. **Low Impact & Native Landscaping:** Abundant use of native plants and Zero Lawn Landscaping uses less water, fewer chemicals and reduced carbon emissions.

HEALTH & SAFETY

36. **Whole Home Fresh Air Ventilation System:** Circulates fresh air in and exhausts stale air out for improved indoor air quality. Remember how great it is to open the windows on that first warm spring day? The accumulation of pet odors, cleaning chemicals, laundry, cooking, etc. from the winter finally getting aired out and fresh air coming in. These homes do it automatically, all year round, several times per day, and it is filtered prior to entry. No more worries about radon or off-gassing from furniture and adhesives in the home.



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HEALTH & SAFETY (CONT.)

37. **MERV 11 Filter:** A high performance furnace filter removes far smaller particles than typical equipment, without creating ozone. Pollen, pet dander, and other air-borne particles are significantly reduced. We even provide an extra filter, for the first change.
38. **Heating System Protection During Construction:** Fans and portable heat equipment is used to dry the home prior to sheetrock installation, protect floor vents with screens, and install filters on all the return air vents during the construction process. This prevents construction dust for entering the ductwork prior to your move-in date.
39. **Low VOC Paints:** Paint with less volatile organic compounds to off-gas during the curing process, directly improving air quality both during construction and after construction is complete. Volatile Organic Compounds, like paint thinner, are not good for you OR the environment.
40. **Carbon Monoxide Detector:** Legend Homes provides these combined within the standard smoke detectors. This detector measures Carbon Monoxide (CO) levels over time. An alarm sounds before dangerous levels of CO accumulate in an environment.

